

COSTS AND RETURNS, NORTHWEST CATTLE RANCHES, 1972



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ABSTRACT

Net returns in 1972 were at record-high levels on viable commercial cattle ranches in the Northern Plains and Northern Rocky Mountains, two of the Nation's leading cow-calf producing areas. In the Northern Plains, returns averaged \$43,600 per ranch, up \$13,400 from 1971 and 3-1/2 times the 1960-64 average. In the Northern Rocky Mountains, returns were nearly 50 percent above a year ago, averaging \$45,300 on the typical ranch with 200 to 500 brood cows represented in this study. Record prices received for stock, particularly calves, contributed most to the historically high returns. Other factors were unusually good range and pasture conditions and record calf market weights. Sustained high calving rates and relatively low livestock death loss in both areas were attributed to improved management and breeding. With U.S. demand for beef forecast to double in 30 years, cattle ranching continues as a good investment, despite steadily mounting input costs.

Key Words: Cattle, Calves, Investment, Costs and returns, Ranch income.

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COSTS AND RETURNS, NORTHWEST CATTLE RANCHES, 1972

by
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INTRODUCTION

About two U.S. farmers in three own cows and heifers. With economic conditions favoring cattle production in recent years, beef cow numbers have increased greatly in all areas in the United States. In 1973 beef cows totaled nearly 2.5 times the number 20 years ago. Despite this increase, consumer demands for beef and other red meats are pressing hard on supplies, and beef prices have mounted. Housewives are complaining about high prices, packers and distributors are complaining about short supplies, and feeders, farmers, and ranchers are complaining about high production costs. Restrictions on meat imports have been removed to alleviate pressure on supplies and prices.

Cow-calf operators, the basic beef supply source, are striving hard to increase output. But cow-calf operations are long-term ventures which require considerable know-how and much capital. Breeding herds cannot be expanded instantly nor can they be liquidated quickly without great loss to the operator and much waste to society in terms of resources.

Beef breeders and crop and livestock researchers have worked hard to develop and improve management skills and practices in both the beef-breeding and beef-raising sectors. Largely because of their efforts, beef cow numbers have increased greatly in the Southeast. Better pastures and development of crossbred animals that can withstand hot humid weather, diseases, and insects testify to the success of their efforts. In 1973 beef cow numbers in North Carolina, South Carolina, Georgia, Florida, Tennessee, and Alabama were more than 3.5 times the number two decades earlier and are now over three-fourths the number in the 11 Western States.

The vast acreages of public land² and open range in the Western States are well suited to beef raising and account for the region's longstanding reputation as an important beef production center. The land's aridity and rather limited productivity tend to limit herd expansion, however. In the last two decades beef cow numbers have increased around 70 percent in the 11 Western States and doubled in the intermountain States (Idaho, Montana, Wyoming, Colorado, Utah, and Nevada). Livestock ranches comprise about 13 percent of the farms in the West, compared with about 3 percent nationally.

This report focuses on estimates of costs and returns in 1972 on commercial cattle ranches in the Northern Plains and in the Northern Rocky Mountain areas, two of the Nation's most important cow-calf producing areas.³ Operators of these specialized cow-calf ranches produce calves for sale to cattle feeders in the Midwest and other areas. They derive most of their ranch income from the sale of calves from an average herd—typically about 300 high-quality Hereford or Angus cows. Calving rates average better than 90 percent, much higher than in the East and Southwest. Most grazing west of the 100th meridian is extensive. Each animal unit (cow and suckling calf) requires about 30 acres of grazing land. Consequently, viable commercial cattle ranches are relatively large, averaging several sections of land. This is particularly true where grazing is almost exclusively on private land.

The Northern Plains livestock area includes 15 counties in southeastern Montana, 8 counties in northeastern Wyoming, and 9 counties in western South Dakota. The area has about 12 percent of the

²Federal land in the public domain and in the National Forest System.

³For earlier data, sources, methodology, and information on organization and management, see *Costs and Returns, Northwest Cattle Ranches, 1960-71*, Agr. Econ. Rpt. No. 232, Econ. Res. Serv., U.S. Dept., Agr., Sept. 1972.

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brood cows and heifers in the 11 Western States and more beef cows than any Western State except Montana. About half the farms in the area are classified as cattle ranches.

Nearly 90 percent of farms in the area have brood cows. About two-thirds of the farms have less than 100 brood cows, and produce less than a third of the cattle. Ranches with 200 to 500 brood cows, which are represented by this study, produce about 35 percent of the area's cattle. A relatively small amount of public grazing land is available. Ranchers who border the public range fence and graze it extensively, however.

When the snowpack is light or there is sufficient rain to soften the matured grass and browse, feeding of hay and supplements is minimal. In most years, some grazing is done in every month. Only light winter feeding is generally required. Around 1,300 pounds of hay normally meet the winter feed requirements of a cow or yearling. This is less than half the hay required per animal in the Rocky Mountain area.

The land base on a viable Northern Plains cattle ranch consists of around 18 sections of land, about 11,500 acres. About 14 sections are operator-owned and 4 sections are rented. Rented land usually includes 2 sections of privately owned grazing land and 2 sections of State-owned land. Operator-owned land includes around a half-section of improved land which produces most of the livestock roughage and grain requirements and provides a little seasonal pasture for bulls and other animals closely contained.

The Northern Rocky Mountain area is a mountainous and plateau area comprising the greater parts of 12 counties in southwestern Montana and 7 counties in east-central Idaho. This area has about 6 percent of the beef cows in the Western States and more than Washington, Nevada, Utah, or Arizona. The ratio of farms to livestock ranches is higher than in the Plains or the Southwest (another important cattle ranching area, see fig. 1), because of the large number of crop and general irrigated farms alongside the rivers and streams in the mountain

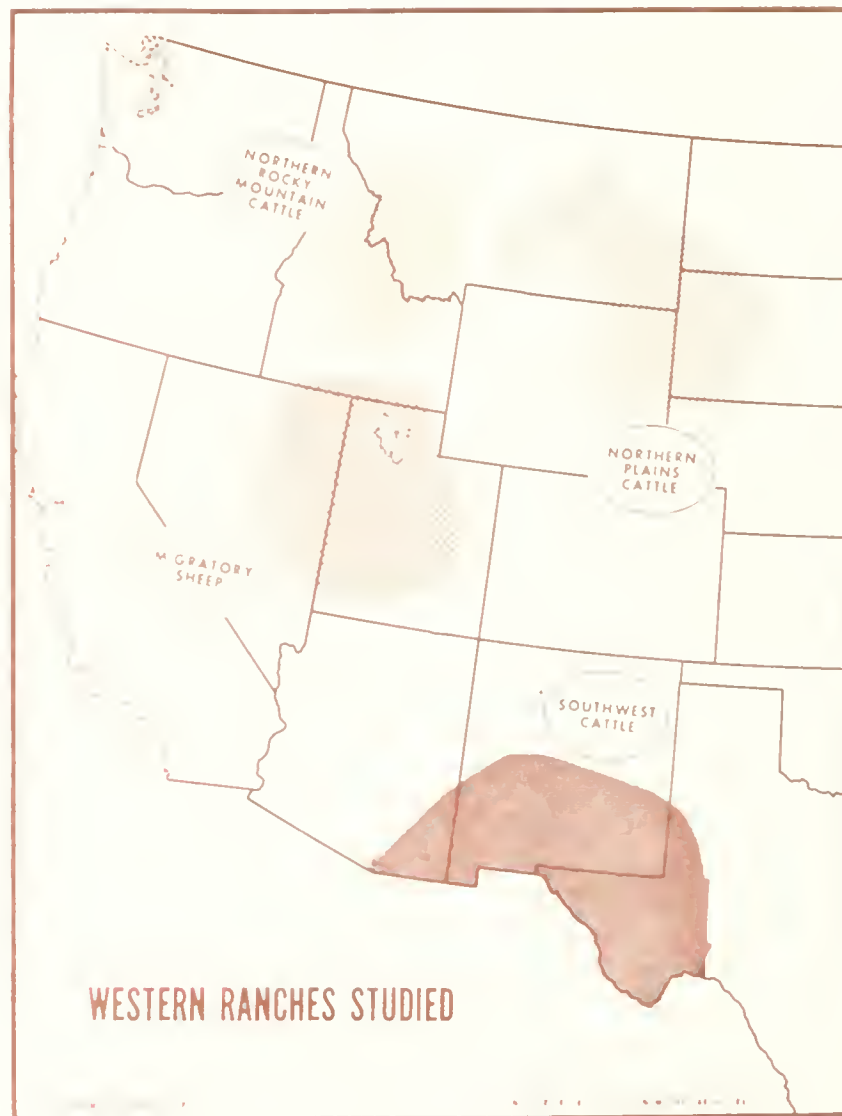


Figure 1

valleys. Although about four-fifths of the farms in the area have brood cows, three-fourths of these farms have less than 100 brood cows and heifers and produce less than 30 percent of the area's cattle. Ranches with 200 to 500 cows and heifers (used in this study) account for one-third of the area's beef production.

Fewer yearlings are carried on these ranches than on cow-calf operations in the Northern Plains. This is due to heavy reliance on public grazing on a permit basis, the relatively high cost of winter feeding, and the economy of grazing a cow and her calf at the same cost as one yearling. Otherwise, the cattle enterprises are on much the same scale.

COSTS AND RETURNS

Northern Plains Cattle Ranches

Net returns in 1972 to the operator and unpaid members of his family and to total capital averaged about \$43,600 per ranch (table 1). This was a record high, up nearly \$13,400 from a year earlier and nearly 3½ times the 1960-64 average. Since 1964 net ranch income has moved up strongly each year, with year-to-year increases ranging from 9 to 44 percent.

Several factors contributed to these strong gains. Prices received for calves, the ranchers' most important single source of income, have advanced each year since 1964. Prices received for calves delivered in the fall of 1972 averaged a record \$50.40 per hundredweight. This compares with \$38.50 per hundredweight in 1971 and \$25.90 per hundredweight in 1960-64. Steer and heifer prices averaged \$38.10 per hundredweight in 1972, up about \$6.50 from a year earlier. Cull cow and bull prices averaged \$27.50 and \$30.30 per hundredweight, respectively, well above year-earlier prices. In late 1972 cull bulls in reasonably good condition were bringing \$35-\$40 per hundredweight. Calf sales comprise about half the total sales on these ranches.

Because prospects appeared good for continued strong demand for beef (and thus feeder calves), Northern Plains cattle ranchers increased their breeding herds slightly during 1971 and 1972. Since cattle on these ranches graze almost totally on private land and such land is very difficult to obtain in this area, ranchers generally have relatively small limits within which they can increase their herd size. However, because of exceptionally good range and pasture conditions since 1966, breeding herds have been maintained at high levels.

Crop yields and range conditions were at record-high levels in 1972 and total hay production was up nearly 8 percent from a year earlier. Because of excellent hay crops in 1970 and 1971, hay carryover

The land base on a viable Northern Rocky Mountain cattle ranch consists of a little over 9 sections, much less than in a typical Northern Plains cattle ranch. This is because of the extensive use of public grazing land available to operators of Rocky Mountain cattle ranches. Around 3 sections of land are rented, most of which is State land. Cropland is devoted almost exclusively to the production of hay and a small amount of feed grain acreage used as a nurse crop for newly seeded hay. Total hay production per ranch varied from 350 to 500 tons during the last decade. Since ranchers feed 5 months, a relatively long period, and around 1½ tons of hay are required to carry an animal during a normal feeding season, hay must be purchased occasionally.

was large, and no hay purchases were made in the last 2 years.

Calf weights reached a new high in 1972. Fall calves averaged almost 440 pounds per head. Except for 1969, calf weights have increased each year since 1965. Some of this increase is due to better range conditions, but much of it results from improved management and breeding. Crossbreeding has increased significantly in recent years and is now accepted practice. Artificial insemination is increasing, largely because of the use of exotic breeds and also the desire to upgrade breeding stock.

Calving rates (number of calves marked or branded per 100 brood cows) have trended upward since the mid-1960's. Despite an almost epidemic outbreak of scours the calving rate in 1972 was unchanged from a year earlier.

Death loss of calves—loss between branding and marking and marketing—was up very slightly from 1971 as was death loss of other cattle. But death losses in recent years have been below normal. Net ranch production was an historic high in 1972, up nearly 4 percent from a year earlier and a third from 1960-64 (fig. 2).

As a consequence of record production and high prices, 1972 gross income averaged nearly \$70,000 per ranch, more than a fourth higher than a year earlier and more than double the 1960-64 average. The 1972 index of weighted average prices received for products sold by Northern Plains ranchers was 180 (1960-64=100), up 35 points from a year earlier (table 2).

Prices paid, including wages to hired labor, continued to advance in 1972, having risen every year since 1963. With a slightly larger cattle enterprise, quantities of inputs used in production rose moderately from 1971, this increasing total operating expense per ranch. Increases were evident in all

Table 1—Northern Plains cattle ranches: Costs and returns, average 1960-64, annual 1971-72

| Item | Average 1960-64 | 1971 | 1972 ¹ |
|--|--------------------|---------|-------------------|
| <i>Acres</i> | | | |
| Total land operated ² | 11,500 | 11,500 | 11,500 |
| Land owned | 8,940 | 8,940 | 8,940 |
| <i>Number</i> | | | |
| Livestock on ranch: | | | |
| All cattle | 432 | 487 | 492 |
| Cows and heifers, 2 years old and over | 292 | 311 | 316 |
| <i>Dollars</i> | | | |
| Total ranch capital, Jan. 1 ³ . . . | 293,290 | 461,210 | 501,940 |
| Land and buildings | 207,560 | 337,520 | 361,580 |
| Livestock | 67,950 | 96,990 | 111,260 |
| Machinery and equipment . . . | 14,840 | 21,280 | 22,140 |
| Crops | 2,940 | 5,420 | 6,960 |
| Total cash receipts | 30,217 | 51,675 | 66,441 |
| Calves | 15,722 | 24,996 | 33,197 |
| Steers and heifers | 7,578 | 15,674 | 19,431 |
| Other cattle | 6,917 | 11,005 | 13,813 |
| Value of perquisites | 967 | 1,177 | 1,251 |
| Inventory change: | | | |
| Livestock | 696 | 1,180 | 875 |
| Crops | 90 | 650 | 893 |
| Gross ranch income | 31,970 | 54,682 | 69,460 |
| Total operating expense | 19,466 | 24,448 | 25,846 |
| Feed and grazing fees | 3,698 | 1,614 | 1,704 |
| Livestock purchased | 1,533 | 1,761 | 1,885 |
| Other livestock expense | 648 | 917 | 995 |
| Crop expense | 403 | 539 | 546 |
| Machinery purchased | 2,321 | 3,385 | 3,485 |
| Other machinery expense . . . | 2,254 | 3,170 | 3,268 |
| Ranch buildings and fences . . | 1,472 | 1,870 | 1,925 |
| Labor hired | 4,204 | 6,416 | 6,844 |
| Taxes | 2,322 | 3,814 | 4,173 |
| Other | 611 | 962 | 1,021 |
| Return to operator labor and management, and total capital | 12,504 | 30,234 | 43,614 |

¹ Preliminary. ² Land rented is grazing land. Some of it is rented on an animal unit month basis and some on an acre basis. These charges are included in expenditures for feed and grazing fees. Thus the value of this land rented is not included in ranch capital, and no real estate tax or related cost is included in the ranch expenditures. ³ Does not include estimated value of rented land.

major expense groups. The largest percentage increases from 1971 were in real and personal property taxes and medicines and services directly associated with the livestock enterprise. Wages to hired labor also rose significantly.

Land and livestock values and machinery prices continued to advance in 1972. On January 1, 1972, a quality brood cow was valued at about \$260, up 13 percent from a year earlier. An acre of grazing land increased nearly \$3.00 per acre, or 7 percent. Land

values per acre were up 85 percent from the early 1960's. Total investment per ranch averaged a little over \$500,000 in 1972, up nearly \$41,000 from a year earlier.

Total real estate mortgage averaged about \$70,000 per ranch, slightly below a year earlier. Chattels or operating loans remained unchanged. Evidently the favorable incomes in recent years have helped to keep debt obligations in check. Interest rates paid on real estate loans advanced fractionally. Rates on chattels

Table 2—Northern Plains cattle ranches: Production, costs, and prices, 1971-72

(1960-64=100)

| Item | 1971 | 1972 ¹ |
|---|------|-------------------|
| Net ranch production | 129 | 133 |
| Range condition | 108 | 119 |
| Production per unit of input | 122 | 124 |
| Operating expense per unit of production | 106 | 109 |
| Total cost per unit of production | 127 | 134 |
| Prices received for products sold | 145 | 180 |
| Prices paid, including wages to hired labor | 137 | 145 |

¹ Preliminary.

declined slightly. Total interest paid on real and chattel mortgages averaged around \$7,500 per ranch, slightly below a year earlier.

Net ranch income (returns to operator and unpaid family members for their labor and management, and to total ranch capital) averaged approximately

\$36,000 per ranch. Return on operator's equity capital averaged about 7.8 percent (table 3). Both were up substantially from 1971.

Table 3—Northern Plains cattle ranches: Returns to resources per ranch, 1972

| Item | 1972 |
|---|----------------|
| | <i>Dollars</i> |
| Net ranch income | 43,614 |
| Interest paid on mortgages ¹ | 7,550 |
| Income available for family living | 36,064 |
| Charge for operator's services ² | 5,700 |
| Return to operator's equity capital | 30,364 |
| Total ranch capital | 501,940 |
| Operator's equity capital | 386,940 |
| | <i>Percent</i> |
| Return on total capital | 7.6 |
| Return on operator's equity capital | 7.8 |

¹ Real estate mortgage of \$70,000 at 5.9 percent and operating loans of \$45,000 at 7.6 percent. ² 125 percent of annual wages to a full-time hired hand plus perquisites.

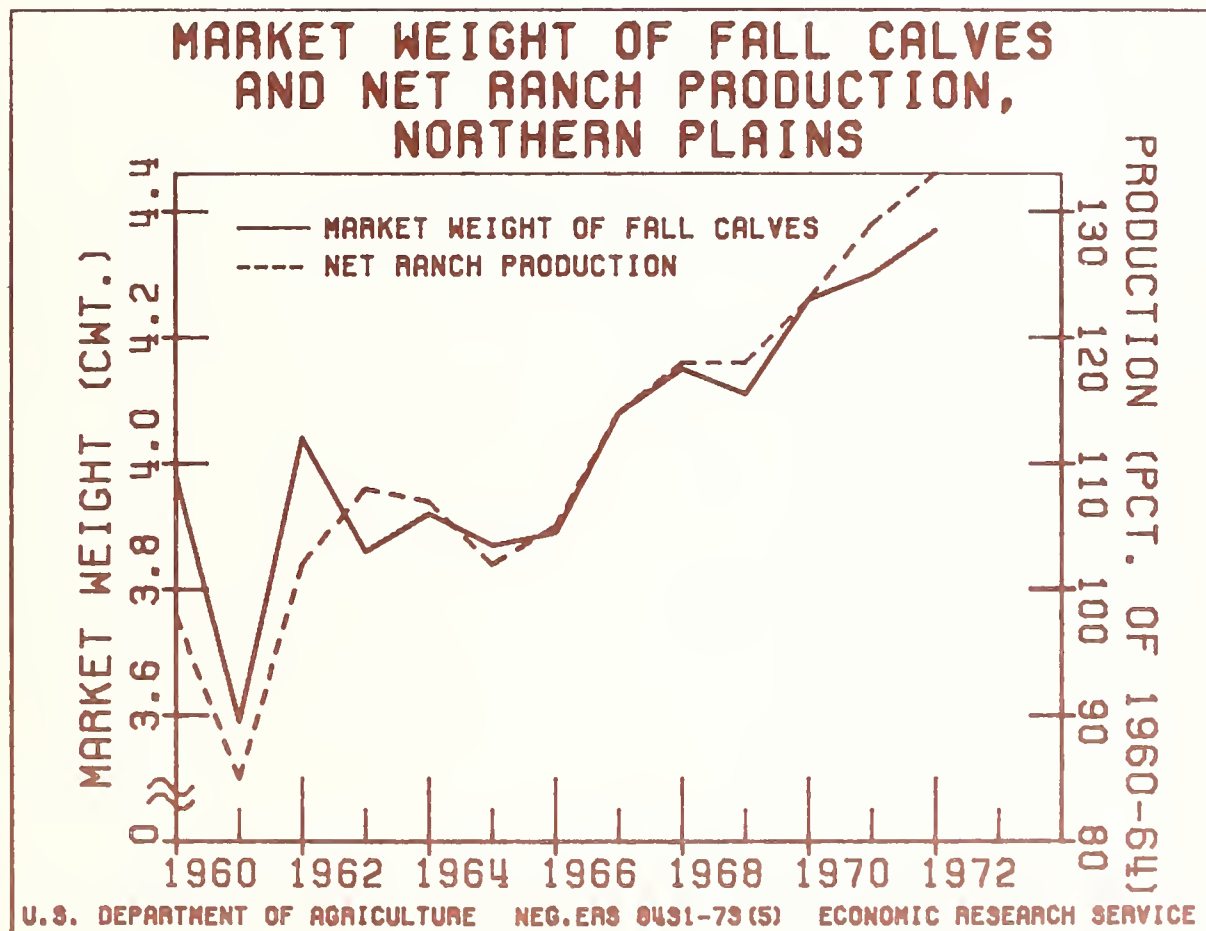


Figure 2

Northern Rocky Mountain Cattle Ranches

In 1972 net ranch income averaged about \$45,300 per ranch on Northern Rocky Mountain cattle ranches. This was a new high, up nearly 50 percent from a year earlier and almost 3½ times the 1960-64 average (table 4). Since 1964, net ranch income has moved up each year from 2 to 47 percent. Many factors have contributed to these exceptional records—better range management, improved

Table 4—Northern Rocky Mountain cattle ranches: Costs and returns, average 1960-64, annual 1971-72

| Item | Average 1960-64 | 1971 | 1972 ¹ |
|--|--------------------|---------|-------------------|
| <i>Acres</i> | | | |
| Total land operated ² | 5,900 | 5,900 | 5,900 |
| Land owned | 4,000 | 4,000 | 4,000 |
| <i>Number</i> | | | |
| Livestock on ranch: | | | |
| All cattle | 363 | 431 | 435 |
| Cows and heifers, 2 years old and over | 277 | 315 | 315 |
| <i>Dollars</i> | | | |
| Total ranch capital, Jan. 1 | 234,470 | 344,060 | 367,040 |
| Land and buildings | 154,720 | 225,290 | 231,520 |
| Livestock | 57,820 | 88,680 | 101,590 |
| Machinery and equipment .. | 14,200 | 20,200 | 20,950 |
| Crops | 7,730 | 9,890 | 12,980 |
| Total cash receipts | 29,756 | 53,410 | 67,649 |
| Calves | 18,664 | 29,722 | 39,022 |
| Steers and heifers | 4,287 | 11,861 | 14,133 |
| Other cattle | 6,805 | 11,827 | 14,494 |
| Value of merchan- | 996 | 1,197 | 1,289 |
| Inventory change: | | | |
| Livestock | 582 | 640 | 1,320 |
| Crops | 186 | 235 | 847 |
| Gross ranch income | 31,520 | 55,012 | 71,105 |
| Total operating expenses | 18,430 | 24,211 | 25,833 |
| Feed and grazing fees | 4,153 | 3,546 | 4,253 |
| Livestock purchased | 1,534 | 1,762 | 1,889 |
| Other livestock expense | 610 | 929 | 1,008 |
| Grooming expense | 770 | 1,181 | 1,203 |
| Machinery purchased | 2,290 | 3,292 | 3,380 |
| Other machinery expense | 2,166 | 2,999 | 3,057 |
| Range building and fences .. | 614 | 745 | 78 |
| Labor hired | 4,053 | 6,246 | 6,598 |
| Taxes | 1,679 | 2,584 | 2,680 |
| Other | 561 | 927 | 985 |
| Return to operator, labor, and management, and total capital | 13,090 | 30,801 | 45,272 |

¹Preliminary. ²Land rented is grazing land. Some of it is rented on an AUM basis and some on an acre basis. These charges are included in expenditures for feed and grazing fees. Thus the value of this land rented is not included in ranch capital, and no real estate tax or related cost are included in ranch expenditures.

³Dollars not include estimated value of grazing permits or rented land.

selection and breeding of livestock, including more crossbreeding, generally more favorable weather and consequently greater production of pasture and range, and increased demand for beef and thus higher prices for feeder calves.

The Northern Rocky Mountain area is characterized by mountains jutting up to 12,000 feet, relatively high plateaus around 7,500 feet, and numerous valleys ranging between 4,000 and 6,000 feet above sea level. No grazing is done at the high mountainous areas. The relatively extensive snowfall and rain in these mountains and the slow summer runoff provide moisture supplies for lower ranges and crop farming. With consistently good ranges during the last decade—the area rarely has a drought—cattle herd size has been held at high levels. During the last 8 years brood cow numbers averaged around 9 percent above the 1960-64 level. In 1970-72 they were about 13 percent higher.

With cattle thriving under good herd management, calving rates have been consistently high, averaging close to 95 percent—topping all other major U.S. cattle-raising areas. Two factors are chiefly responsible. First, range feed in this area is highly nutritional, containing most essential elements for good livestock breeding and growth. Second, with such long heavy winter feeding, ranches are very careful to cull out nonpregnant brood animals before the winter feeding period. Many ranchers make pregnancy tests or inspect their brood cows closely to eliminate barren cows.

Because the spring of 1972 was late, wet, and cold, calf scours was rampant in many herds. Nevertheless, the calving rate was around 93 percent, about the same as in the two previous seasons.

Death loss of calves (loss between branding and marketing) was near the 1971 estimate and a fourth below the 1960-64 average. An extra 3 calves marketed per 100 brood cows in 1971-72 meant a 6.2-percent increase in operator returns (returns to operator labor and capital).

Calf market weights have been trending higher due to better range conditions and improved breeding and management. In 1972 they averaged only 2 pounds per head under the record high in 1969 (fig. 3). Although relatively few brood cows are artificially inseminated, there has been an increase in artificial breeding, use of better breeding stock, and a noticeable improvement in quality of breeding animals. Crossbreeding, which tends to raise the conception rate in brood cows, increase livability of calves, and step up calf marketing weight, has also increased significantly. It is estimated that more than half of the 1972 calf crop in this area is the result of crossbreeding.

These various factors combined pushed net ranch production to new records in recent years. In 1972 net ranch production was 27 percent above the 1960-64

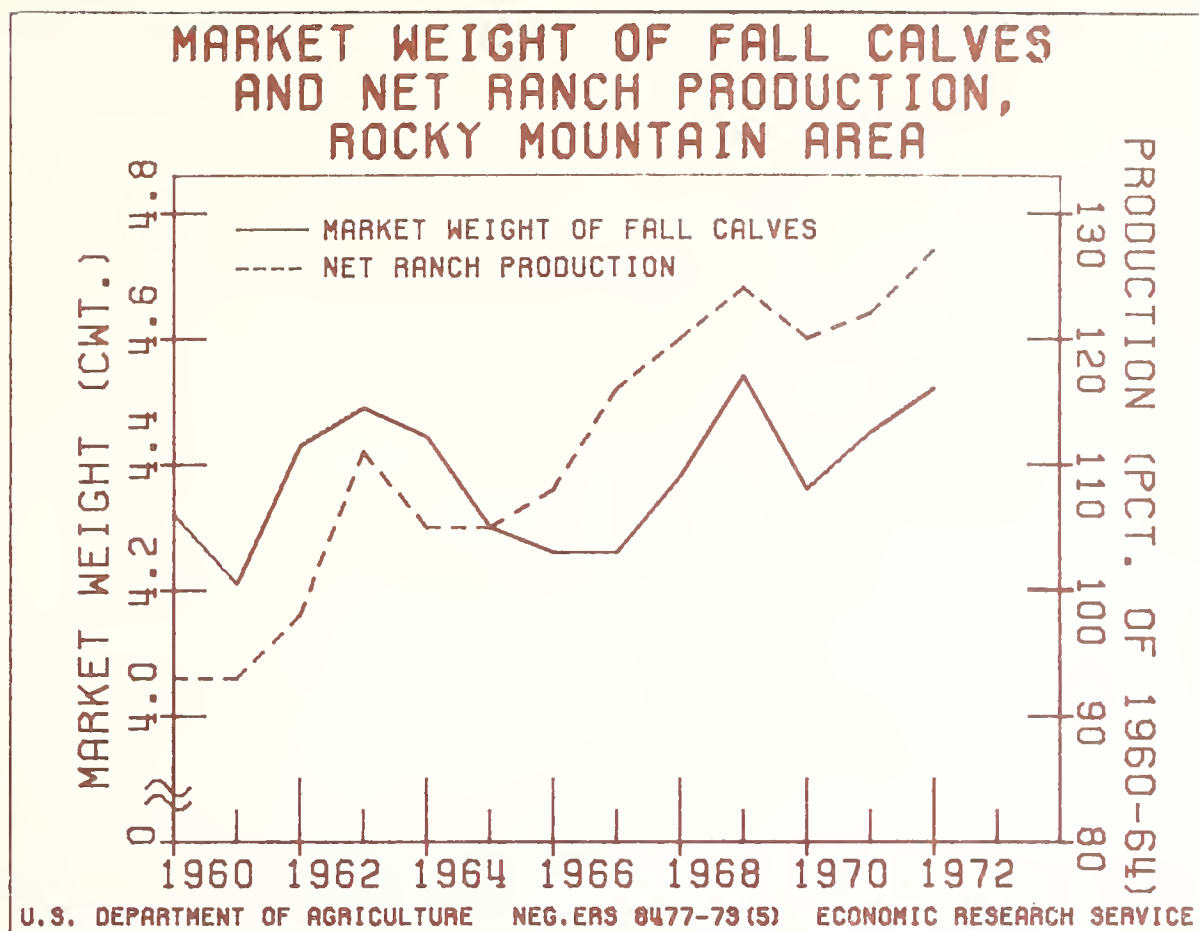


Figure 3

average and nearly 5 percent above the 1971 estimate. The previous 5-year (1967-71) production averaged a fifth above the 1960-64 average.

Record-high prices were received for cattle sold on Northern Rocky Mountain ranches in 1972, nearly double the 1960-64 average and a fourth above 1971 (table 5). Calves sold for nearly \$50 per

hundredweight, yearlings around \$38.25, and culled cows and bulls around \$30, all record prices. Calf sales account for almost three-fifths of cash receipts on these ranches. Few yearlings are kept because of heavy winter feeding requirements and the lower profitability of grazing a yearling, relative to a cow and her calf, on public land.

Record-high cattle prices and production increased gross income to an alltime \$71,000 per ranch in 1972, up 29 percent from a year earlier and 2¼ times the 1960-64 average. To attain the record 1972 production, more inputs were required and prices of most of these inputs were up from previous years. Prices paid in 1972 for production inputs averaged nearly two-fifths higher than in 1960-64 and up about 5 percent from 1971 (table 5). Total operating expense in 1972 was about 7 percent above a year earlier with increases in all major expense items. The greatest increase was in feed purchases, including grazing fees. Fees to graze public land continued to escalate as scheduled, and slightly more hay was purchased in 1972 at considerably higher prices.

Total investment per ranch mounted steadily as land values and livestock prices continued their upward trend. In 1972 inventory values of brood cows were 50 percent higher than in 1960-64, calves were up 74 percent, and per acre values of range land rose 55

Table 5—Northern Rocky Mountain cattle ranches: Production, cost, and prices, 1971-72

| (1960-64=100) | | |
|---|------|-------------------|
| Item | 1971 | 1972 ¹ |
| Net ranch production | 122 | 127 |
| Range condition | 99 | 100 |
| Production per unit of input | 113 | 117 |
| Operating expense per unit of production | 114 | 117 |
| Total cost per unit of production | 128 | 132 |
| Prices received for products sold | 152 | 190 |
| Prices paid, including wages to hired labor | 132 | 139 |

¹Preliminary.

percent. Total investment per ranch, excluding estimated value of grazing permits, approached \$370,000.

According to recent surveys made in the area, nearly all ranchers were owner-operators and carried real estate debts and operating loans. Real estate mortgages in 1972 averaged about \$61,000 per ranch, approximately one-fourth of the inventory value of land and buildings. With 1972 real estate debt down about 6 percent from a year earlier, current economic conditions are evidently helping ranchers reduce their real estate mortgages. Operating loans and the ratio of value to debt were also lower in 1972. There was little change in interest rates from 1971. Consequently, total interest paid on mortgages in 1972 was down about 6 percent.

Returns to operator and unpaid family members for their labor and capital (after paying interest on farm mortgages) averaged nearly \$39,000 per ranch, up nearly 56 percent from a year earlier. Return to operator's equity capital also was up substantially from 1971 (table 6).

Table 6—Northern Rocky Mountain ranches: Returns to resources per ranch, 1972

| Item | 1972 |
|---|----------------|
| | <i>Dollars</i> |
| Net ranch income | 45,272 |
| Interest paid on mortgages ¹ | <u>6,580</u> |
| Income available for family living | 38,692 |
| Charge for operator's services ² | <u>5,600</u> |
| Return to operator's equity capital | 33,092 |
| Total ranch capital | 367,040 |
| Operator's equity capital | 266,040 |
| | <i>Percent</i> |
| Return on total capital | 10.8 |
| Return on operator's equity capital | 12.4 |

¹ Real estate mortgages of \$61,000 at 6 percent and operating loans of \$40,000 at 7.3 percent. ² 125 percent of annual wage to a full-time hired hand plus perquisites.

Capital Investment in Western Livestock Ranches

Capital investment in a typical commercial livestock ranch is big business these days, ranging from \$250,000 to more than \$500,000. Investment per ranch has risen as buyers have bid up the price of land, and as costs of machinery and equipment and related items have advanced with the general price level.

From 1960 to 1972, total investment per ranch increased 81 percent on Northern Plains cattle ranches, 71 percent on Northern Rocky Mountain cattle ranches, and 29 percent on Utah-Nevada migratory-sheep ranches. On Southwest cattle ranches, capital assets advanced 51 percent from 1965 (earliest estimates available) to 1972. This is an average annual increase ranging from around 2.2 percent on sheep ranches to 6.4 percent on Southwest cattle ranches.

On western livestock ranches, institutional factors such as access to public grazing land are an important factor in land investment. Migratory-sheep ranchers and Rocky Mountain cattle ranchers who make wide use of public land naturally have relatively less investment in private land. However, many of these ranchers have considerable investment in permits. (Value of permits is not included in cost estimates in this report.) The value of grazing permits appears to be declining, however, and theoretically should approach zero as fee rates on public lands are escalated to reach an eventual fair market value competitive with private grazing lands.

Herd size also makes a difference in ranch investment—and herd size has changed more on some ranches than on others. Investment per animal unit provides a suitable basis for measuring changes in capital invested. Investment per animal unit has increased significantly on ranches in the four areas studied, with investment exceeding \$1,600 per brood animal equivalent on Southwest cattle ranches (table 7). Greater increases have taken place on cattle ranches than on sheep ranches. No doubt much of this increase is due to the cattle industry's generally more favorable economic position in recent years and prospects for continued strong demand for beef, at least for the foreseeable future. U.S. demand for beef is expected to double before the turn of the century, with a further perceptible increase in demand for high-grade production.⁴

Table 7 brings another important point into sharper focus. A ranching operation entails a particularly high investment in assets other than livestock. In 1972, for each \$1.00 invested in cattle an investment of \$2.60-\$5.10 was required in land, fences and corrals, stock water ponds and improvements, and machinery and equipment. Sheep required about \$2.10. Thus investment in livestock is by far the smallest part of total ranch investment.

Returns to Capital

The question is often asked: "What return on investment does a livestock ranch provide?" Until the last couple of years many ranchers who had both

⁴H. J. Hodgson and R. E. Hodgson, "Changing Patterns in Beef Cattle Production," *Agricultural Science Review*, Vol. 8, No. 4, 1970, p. 17.

Table 7—Investment per animal unit, selected western livestock ranches, 1960, 1965, and 1972

| Item | Cattle ranches | | | | | | | | | Migratory-sheep ranches ⁴ | | |
|-------------------------------------|------------------------------|------|-------------------|------------------------------|------|-------------------|------------------------|-------|-------------------|--------------------------------------|------|-------------------|
| | Northern Plains ¹ | | | Rockey Mountain ² | | | Southwest ³ | | | | | |
| | 1960 | 1965 | 1972 ⁵ | 1960 | 1965 | 1972 ⁵ | 1960 | 1965 | 1972 ⁵ | 1960 | 1965 | 1972 ⁵ |
| | Number | | | | | | | | | | | |
| Animal units ⁶ | 403 | 430 | 454 | 344 | 361 | 411 | NA | 348 | 341 | 470 | 484 | 491 |
| | Dollars | | | | | | | | | | | |
| Investment in | | | | | | | | | | | | |
| Land and buildings | 484 | 581 | 796 | 400 | 526 | 563 | NA | 908 | 1,327 | 247 | 255 | 284 |
| Livestock | 162 | 133 | 245 | 161 | 141 | 247 | NA | 124 | 268 | 111 | 121 | 152 |
| Machinery and equipment | 35 | 37 | 49 | 40 | 43 | 51 | NA | 30 | 38 | 23 | 24 | 34 |
| Crops | 7 | 10 | 15 | 24 | 30 | 32 | NA | 0 | 0 | 2 | 2 | 3 |
| Total | 688 | 761 | 1,105 | 625 | 740 | 893 | NA | 1,062 | 1,633 | 383 | 402 | 473 |

NA = not available. ¹ Consists of 15 counties in Montana, 8 counties in Wyoming, and 9 counties in South Dakota. ² Consists of 12 counties in Montana and 7 counties in Idaho. ³ Consists of 20 counties in Texas, 11 counties in New Mexico, and 3 counties in Arizona. ⁴ Consists of 19 counties in western Utah and 6

counties in eastern Nevada. ⁵ Preliminary. ⁶ An animal unit consists of 1.0 cow or heifer 2 years old and over, 1.33 steers or heifers 1 year old, 0.83 bull of breeding age, and 5.0 head of stock sheep.

sheep and cattle stated that, generally speaking, sheep yielded greater profits than cattle. A glance at table 8 provides a partial explanation. It was not until 1970 that returns to investment on cattle ranches began to outstrip those on sheep ranches. During the 1960-69 period returns on migratory-sheep ranches averaged 4.0 percent, compared with 3.2 percent and 4.6 percent on Northern Plains and Rocky Mountain cattle ranches, respectively. During the years for which data are available on Southwest cattle ranches, returns were much lower than on the other livestock ranches. Southwest cattle ranches have been plagued with droughts during much of this time and investment runs high on these ranches. Wool prices almost hit historic lows in 1971 and 1972 and lamb prices have not shared with cattle in the recent upswing. This partly accounts for the relatively poor showing of sheep in 1971 and 1972.

"Would an operator or an investor make a higher return on his capital investment in some other venture than a livestock ranch?" The 1960-69 composite return on common stocks reported by Standard and Poor was 3.19 percent. For 1970-72 it

was 3.27 percent. Ranch returns were well above returns on common stocks.

Table 8—Returns to ranch capital, selected western livestock ranches, 1960-72¹

| Year | Sheep ranches, Utah-Nevada | Cattle ranches | | |
|----------------|----------------------------|----------------|-----------------|----------------|
| | | Southwest | Northern Plains | Rocky Mountain |
| | | <i>Percent</i> | | |
| 1960 | 0.9 | NA | 2.8 | 3.1 |
| 1961 | .2 | NA | 2.3 | 4.1 |
| 1962 | 3.9 | NA | 4.5 | 5.7 |
| 1963 | 2.3 | NA | 3.7 | 5.0 |
| 1964 | 3.2 | NA | 2.0 | 2.5 |
| 1965 | 4.7 | 1.6 | 2.1 | 3.5 |
| 1966 | 4.3 | 1.9 | 3.3 | 4.8 |
| 1967 | 6.2 | 1.2 | 3.2 | 4.9 |
| 1968 | 6.4 | 1.4 | 3.5 | 5.5 |
| 1969 | 7.6 | 1.6 | 4.1 | 7.0 |
| 1970 | 6.1 | 1.1 | 4.7 | 6.5 |
| 1971 | 4.9 | 1.0 | 5.4 | 7.4 |
| 1972 | 4.2 | 3.6 | 7.6 | 10.8 |

NA = not available. ¹ Net ranch income less a nominal charge (annual wage to year-round hands x 1.25) for operator's labor and management divided by total ranch investment.

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